

Title: Application of Terrestrial Environments in Orion Assessments

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This presentation summarizes the Marshall Space Flight Center Natural Environments Terrestrial and Planetary Environments (TPE) Team support to the NASA Orion space vehicle. The TPE utilizes meteorological data to assess the sensitivities of the vehicle due to the terrestrial environment. The Orion vehicle, part of the Multi-Purpose Crew Vehicle Program, is designed to carry astronauts beyond low-earth orbit and is currently undergoing a series of tests including Exploration Flight Test (EFT) - 1. The presentation describes examples of TPE support for vehicle design and several tests, as well as support for EFT-1 and planning for upcoming Exploration Missions while emphasizing the importance of accounting for the natural environment's impact to the vehicle early in the vehicle's program.